

# California GARDEN

SEPTEMBER-OCTOBER 1986

One Dollar

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## August 30 - October 11

**Early California Reflections Exhibit and Lecture Series** in San Juan Capistrano Library, 31495 El Camino Real, San Juan Capistrano, CA. Reservations for lectures and info: call (714) 493-1752. Exhibit hours 10-4 p.m. Tues. through Sun.

## August 31

**Dedication of the San Diego Sub-Tropical Fruit Garden** at the zoo, 11 a.m.-3 p.m. Educational booth with maps and list of plants in garden will be on display in canyon below the garden, across from the Canyon Cafe. Public is invited.

## September 3,4

**Southwestern Judges' Council's Design and Horticultural Symposium.** Casa del Prado, Rm. 101, Balboa Park, San Diego, CA. Sessions cover table settings, strelitzias and bromeliads plus techniques for judging proteas. Everyone is welcome. For info: Jo Ann Gould (619) 232-5762.

## September 4-7

**American Begonia Society's 54th Annual Convention and Begonia Show** at Hanalei Hotel in San Diego, CA. Registration: Michael Ludwig, 7007 Mt. Vernon Ave., Lemon Grove, CA 92045, (619) 461-6906.

## September 4, 11, 18, 25

## October 2, 9, 16, 23, 30

**Thursday Workshop with Colleen Winchell.** Free Floral Crafts Instruction. Open to the public. Casa del Prado, San Diego Floral Association Library, Room 105, Balboa Park. Thursdays 10:00 a.m.-3:00 p.m. Information: 479-6433.

## September 6-7

**San Diego Association Professional Horticulturists Third Annual Show,** Casa del Prado, Room 101, Balboa Park, San Diego, CA. Sat: 10-5 p.m.; Sun: 10-4:30 p.m. Free.

## September 7

**Ohara School of Ikebana, La Jolla Ch.** Food Sale and Flea Market Casa del Prado, Balboa Park, Patio area near room 104, Sunday. 11 a.m.-3 p.m. Japanese lunches, baked goods, beverages, plants, white elephants and hand crafted items for sale. Information: Connie Davis 672-0128.

## September 16

**Hort 40,** a 16-week, 3 unit course on growing rare fruit, a wide variety of specialty fruit, berry and nut crops in San Diego County. Tuesdays from 9:00 a.m. till noon. Information: Call Claude Sweet, (619) 286-1534.

## September 20-21

**San Diego Bromeliad Show, "Bromeliad Harvest",** Casa del Prado, Room 101, Balboa Park. Large plant sale and demonstration on growing and caring for bromeliads. Sat: 1-4:30 p.m., Sun: 11-4:30 p.m. Free.

## September 25

**UCSD Extension 10-week course titled Floral Design; Entertaining with Flowers.** Course meets from 7-10 p.m., Thursdays September 25-December 13. Information: call 534-3400.

## September 26-28

**Palomar Orchid Society's Annual Fall Show** at Plaza Camino Real, Carlsbad, CA. Fri: Show set-up and registration of exhibits 4-9 p.m.; Sat: Registration of exhibits 8-9:30 a.m.; Judging 10 a.m.; Sun: Exhibits and awards may be seen 11-4 p.m.. Public is invited. Anyone may enter his orchid plants. Info: (619) 941-0382.

## September 27-28

**San Diego Bonsai Fall Show,** Casa del Prado, Room 101, Balboa Park, San Diego, CA. Sat. and Sun. 10-5 p.m. Free.

## October 1, 8, 15\*

**Basic American Contemporary Flower Arranging** with Martha Rosenberg. Casa del Prado, Balboa Park. Wed: 9:30 a.m.-2:30 p.m. Register early with Marie Walsh 298-5182. Classes limited to 20 persons.

## October 4

**Ohara School of Ikebana, La Jolla CH.** 50th Anniversary, Hotel Inter-Continental, Conference Pavilion Room, 333 West Harbor Drive, San Diego, CA. Sat. 12:00 noon. Lunch \$20.00.

3:00 p.m. Ikebana demonstration by Mr. Kenpoh Ohara from Tokyo, \$5.00. Validated parking available. Call Connie Davis 672-0128 for tickets.

## October 4-5

**Balboa Park African Violet Fall Show,** Casa del Prado, Room 101, Balboa Park, San Diego, CA. 10-4 p.m. Free.

## October 11-12

**Annual Beauty and Beast Show,** San Diego Wild Animal Park. 9 a.m.-5 p.m. Info: Teri Basta 747-8702 Ext. 35.

## October 17-21

**Ikebana Fifth World Convention at Tokyo Japan.**

## October 18-19

**North County Rose Society's 20th Annual Rose Show,** Plaza Camino Real, Carlsbad, CA. Sat. 1-6 p.m.; Sun. 12-4 p.m. Free. Cut rose entries from other rose societies are welcome.

## October 18 & 19

**San Diego Orchid Society Fall "mini" Show,** Casa del Prado, Majorca Room, Balboa Park. Sat: 12:00 to 5:00 p.m. Sun: 10:00 to 4:30 p.m. Free.

## October 21\*

**San Diego Floral Association Meeting,** 6:00 p.m., Casa del Prado, Room 101, Balboa Park. Reservations: 232-5762.

## October 29, November 5, 19\*

**American Contemporary Flower Arranging** with Adrienne Green, Casa del Prado, Balboa Park. Wed: 9:30 a.m.-2:30 p.m. Register early with Marie Walsh 298-5182. Classes limited to 20 persons.

## November 1 & 2

**San Diego Tropical Fish 16th Annual Aquarium Show,** Casa del Prado, Majorca Room, Balboa Park. Sat: 12:00 - 6:00 p.m. Sun: 9:00 a.m. - 4:30 p.m. Free.

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LOIS M. VAN BUREN AND RICHARD BIERD — Please send  
your address to San Diego Floral for your subscription.

#### CORRECTIONS TO JULY/AUGUST ISSUE:

- p. 99 — Guadalupe Palm, Front cover illustration by Irina Gronberg.  
p. 103 — Seeds for the Guadalupe Palm will be available at the end of Aug-  
ust at San Diego Floral office. Call first before you go to pick them up.  
P. 112/13 — *Howea forsterana*.  
p. 125 — Professional Women's Horticulture and Landscape Association:  
Pres: Karen Kees, 566-3851, P.O. Box 3424, San Diego, CA 92103.

#### FRONT COVER: BEGONIA 'Lana' by Pat Maley

B. 'Lana' was developed in 1965 by Paul and Margaret Lee, and reg-  
istered in 1973 as No. 392. It was named for the late Lana Shone  
from Lakeside, who was a longtime member of the Alfred D. Robin-  
son and San Miguel Begonia Societies. It has a pink flower which  
turns almost red in bright light. It makes a good parent plant, but  
blooms so much it is hard to get cuttings. It is a medium grower and  
a San Diego hybrid. Margaret Lee, the hybridizer, is the President of  
the American Begonia Society which is having its convention here in  
San Diego at the Hanalei Hotel from September 4–7, 1986.

Pat Maley is an artist from Placerville, California who specializes in  
begonias.

For only \$25.00 a year, a professional business relating to horticulture can become a  
member of San Diego Floral Association and be listed in each issue of California Gar-  
den magazine as a "Professional Affiliate". This listing would include name, address  
and telephone number of the business. It is a wonderful opportunity to reach garden-  
ers.

The deadline for articles and events for the Sep./Oct. 1986 issue is Sep. 21, 1986.

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Casa del Prado, Balboa Park, San Diego, California

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IRIS  
Illustration by:  
NIKI  
THRELKELD

# IRIS ACTION

By Dorothy N. Runde

We won't disturb the soft and lovely 'Pink Taffeta'. 'Double Praise' has rich orange buds, just bursting with promise. 'Plum Gleam', 'White Lightning' and 'Bengal Tiger' show us that blossom time is still here. We can wait!

But many of the tall bearded iris clumps are just green now. All are sending up new fans.

We peel away the tired leaves and pinch a few tiny weeds. Grooming and weeding is fairly easy in the six raised beds. Would the whole yard be so designed!

Time was we had three or four hundred iris in ground-level beds. That was before we had a tiller. Ambition gradually fizzles away. If we were now beginners in growing iris, we would opt for the raised beds solely, unless we were going into hybridizing or commercial gardens.

There are very small tillers on the market now that can be used to work or rework the soil mix in raised beds.

We bought two by twelve inch redwood and

had it cut in four and eight foot lengths at the yard. Paul put them together with bolts, through angle iron, making four by eight foot beds.

Before they were set in place, we dug very deeply into the part clay soil, discarding many chunks of pure clay and rocks. A three by five screen of hardware cloth helped with that, so we had just good old fine dirt to work with.

Into the bottom of each rectangular pit we blended generous handfuls of gypsum for drainage. To that we mixed many bales of lomex and yards of sand, giving us our six raised beds of soil that someone called "ice cream." The sand we incorporated more generously in the lower levels; the mulch more in the upper.

Eight or ten inches from the surface we mixed in a balanced fertilizer; in the top dressing, extra mulch and a few small handfuls of micro-max.

No, the six beds were not all completed in one season, but how rewarding the hard work has been.

(Over)

In planting each rhizome, a handful of bone meal or super phosphate is blended in just below where the first roots will be, to prevent burning and promote good bloom. Plant them very shallow, with just a thin layer of soil over the root.

New growth pups grow on the heel or sides of the parent, so by planting the heel to the sunny direction, the little fellows won't have to lean and push so hard to see the light.

Rhizomes can be staggered to give more growth room; about six for the outside rows, and five down the middle.

Digging time is almost here. To dig and replant two beds each year is about our speed.

Usually one digs, being careful to keep all of one clump and its label together.

With a good china marker, another will write the name, and ideally the color, blooming habit i.e. R for rebloomer, hybridizers, name and year of introduction on the leaves of each fan.

Trim the roots and tops neatly with large scissors, or, if you're lucky, a second best paper cutter. The latter works like a dream.

One bed dug, the digger can pitch in with the trimming and marking. The pile of trash will include all the rhizomes that show they have bloomed, for they will not bloom again.

All finished? Aching all over? Wait, there is more to do. Wash them all thoroughly in a tub, laundry basket, or lined up on that screen you used to sift the dirt. Dry thoroughly.

Ideally there is a right time and way to do everything. Who among us has collected no more seeds, roots and cuttings than can be taken care of at exactly the right time?

So, it is late September before we get all our iris planted. We are not alone. We are fortunate. In our climate, we can get away with it.

When we have chosen the rhizomes to plant in our reworked, fumigated beds, we will have many fine healthy and clean marked plants left over. Some are for special friends and new iris enthusiasts, the rest for August and September plant sales, of the San Diego & Imperial Counties Iris Society, Third Sundays, Casa del Prado Patio, Balboa Park.

It's a good feeling!

*Dorothy Runde has been quite active in the San Diego-Imperial Counties Iris Society.*

## THE PERENNIAL HERB

Perennial herbs become dear old friends. The first signs of their reappearance each spring is one of the tenderest moments of a gardener's year. The perennial will visit year after year to become a welcome and friendly face for your spring and summer days.

Your perennials will be strongest if you grow them from seed. Starting perennials from seed is the long way to go, but it is the only way to give your plants a tap root. A tap root makes all the difference in the world. It is the main stem of the root system which drives deep into the soil. This is where the life force of the plant will sleep over the cold winter. It also insures a deep water supply to the plant system during the hot days of summer. A plant without a tap root is much more delicate and tender than one with a tap root.

Many perennials are sold as rooted cuttings in two to six inch pots. When a cutting is rooted in water or a soil medium, only lateral feeding roots are produced. The lateral root system is designed to collect surface minerals and moisture. They rarely go deeper than 6 or 8 inches. It is easy to see that a 6-inch deep root system will have a difficult time supporting the life force through a freezing winter or during a summer heat wave.

Starting perennials from seed takes a little longer but yields a far stronger plant for years and years of enjoyment. Perennial seeds can be started anytime outside during warm months, or indoors during cold months.

For a large catalog listing of perennial herb seeds send \$1.00, which includes postage and handling, to HEIRLOOM GARDEN SEEDS, P.O. Box 138, Guerneville, CA 95446. Mention this article for a free pack of perennial flower seeds.

**First Organizational Meeting, San Diego Bulb Society, Sept. 11, 1986, 7:00 p.m., Standley Park Recreation Center, Governor Dr. in University City. Contact: Cynthia Drake 271-8933.**

*John Goodpasture*

*Horticulturist*

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BOTANICAL LATH HOUSE IN BALBOA PARK

PHOTO BY WILBUR GLOVER

## Water Features: Site Selection

By Bob Fenner

When you've decided that a fountain, reflecting pool, fish pond or waterfall is just right for you for your landscape, you need to answer some basic questions as to the position, orientation to the sun, and availability of utilities.

Site selection involves a balance of functional and aesthetic considerations. How will the water effect look and sound from your most common viewing place(s)? Happily, most can be situated in such a way as to be conveniently viewed from the walkway, kitchen, living room, patio or other frequented spot. Likewise, thought must be given to the placement of equipment, if any is to be used. Often pumps, filters and related gear can be remotod to areas beyond the feature. Sometimes they can be situated below ground in landscape irrigation boxes or submersed to mask their appearance and noise. With a little ingenuity your fall or stream can disguise your pump noise.

Site selection has to also include consideration of future maintenance. For the most part, water effects should be near the home, near a wall to reduce spray, splash, evaporation by the wind. If the pond has living things in it, placing it out of the way of the elements will cut down on temperature change and help keep the system stable. Most aquatic plants used in ponds - lilies, lotus, water lettuce, hyacinths, papyrus, horsetails, iris, and others - do best in full sun. Therefore a southerly, open exposure is preferred for a planted water effect. The less sun the better for those systems where no live plant material is to be grown. You might consider a lathe or screen shelter over your water effect as an adjunct to algae control and to keep out leaf litter.

Runoff and Drainage. When building a water effect and trying to plan on keeping it clean you

should think of drainage of the feature as well as rain and irrigation runoff getting into it. What will happen if the basin should dump completely? Will it flood your neighbor's property? Rain on your roof or ground should not flow into your feature, unless this is planned, as noxious chemicals can be introduced. Most times runoff and overflow are easily controlled with the use of existing slope and drainage of your property. To drain your system, it may be advantageous to locate the water above grade near a sewer clean out, canyon, or street. Some people hook up their water feature discharge lines for cleaning and de-watering to existing irrigation.

Nearness to existing electrical and water supply is important. Check with your local building codes as to set-backs, easements, and to see if you can use inexpensive romex or PVC shielded conduit to a new junction box to run you possible pump, lights, timebox.

For refilling, most people simply top off their water levels from time to time while watering their landscape. Alternatively, you can cut in a floating check-valve to a pressurized water source. We'll hear about these under the construction, maintenance topics.

Every landscape can benefit from a well designed and built water effect. Careful, planned placement can go a long way to insure maximum utility and minimum care.

*Bob Fenner is a standard in the waterscape field with partnerships in Aquatic Environments, design and construction; Aquatic Life Services, maintenance and service; Wet Pets, retail/Aqua-Chem, manufacturing; Aquaritech, distribution, sales.*

# Succulents in a new Bonsai Concept



PORTULACARIA AFRA AND EUPHORBIA BALSAMIFERA

By Rudy Lime

The major attractions and characteristics of succulents that led me to keep them in my collection are listed below:

1. **CAUDEX** — Swollen food and water storage organ, all root, all stem or both. They have a special unconventional beauty.
2. **LEAVES** — Their shapes patterns and texture.
3. **FLOWERS** — I like the year round flowering kind. This adds permanent contrasting color to my collection.
4. **STEMS** — Their interesting shapes and bizarre covering or armor.
5. **PEELING BARK** — Red, brown or white paper thin bark that peels. Gives distinctive maturity to the plant.
6. **ROOTS** — When raised and exposed are fascinating. Their beauty has the same appeal as surrealistic art by Picasso or Dali.
7. **BONSAI MATERIAL** — Trainable as bonsai using standard bonsai techniques.

Nature, in the process of developing functional design, has often carved the plants in unusual

and fascinating shapes. This is very evident among succulents. Because of these immensely varied and intriguing aspects, succulents offer an exceptional opportunity for the artistic plant enthusiast to design his horticultural knowledge, focus more attention on training, and guiding constantly during the plant's growth, in order to enhance such rare qualities. In such an approach, the plant then becomes a living sculptural work. With this in mind, I now bring your attention towards the act of bonsai.

If you admire bonsai and wish that you could create your own bonsai plants, there is a new way for you to start and build your own artistic display of plants using bonsai techniques. The growing realization that the bonsai techniques can be applied to succulent plants has expanded the plant horizon of the experienced bonsai artist. Best of all, the beginner can now start and build a beautiful bonsai collection using succulent plants. They are easier to care for, and faster to produce. The plants are readily available at cactus and succulent sections of most nurseries. The nurseries would welcome your new demand and if such demand increases, the choices of plant species and varieties may increase as well.

In order to survive in harsh arid ares, a succulent plant has had to develop the ability to store water. This characteristic is a very important quality, which means that a plant being grown with bonsai techniques does not have to be watered daily. Succulent plants can withstand a lot of neglect, whereas the standard bonsai tree or shrub needs constant care, especially watering. Some of the succulents respond even better when the soil is dry for periods of one week to one month. This gives the plant a hardened and aged character. The *Portulacaria afra* and the *Euphorbia balsamifera* are examples of plants that are watered only once a month.

The unequalled forms and unusual shapes of succulent plants could add exciting choices of plants for the beginner as well as the experienced bonsai artist. The rare qualities inherent to the succulent should expand the traditional basic shapes and forms as well as trees and shrub materials for the artist.

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The interesting characteristics of succulents broaden the range of application available for the bonsai enthusiast. He could stick to traditional forms, or, if he wishes to depart and desires to exercise his artistic freedom, he could forego the traditional approach and rather create his own artistic interpretation to exploit the rare quality that the succulent plant possesses. Example of this departure toward a new concept is shown in the picture that includes *Fockea edules*, *Mestoklema tuberosum*, *Euphorbia didieroides* and *Euphorbia stellata*. The beauty of these four plants is somewhat in the appeal of surrealistic art by Picasso or Dali. Some of those who will see the plants for the first time, may say the plants were perverted. This is not so. The unusual shapes are natural which is intrinsic to the succulents you see. They have a special beauty of their own. I associate them more to the science fiction fantasy of 'cosmic' plants and creatures, the imaginative traces of prehistoric age creatures or my dreamed-up would-be mutants of the living survivors of a nuclear holocaust. Such perverted shapes and forms become more evident to the disbeliever as they become more familiar with the very many succulents that are rare and are mostly in the plant's habitat or in the collection of succulent specialists. But if you want to do only traditional forms with succulent bonsai plants, there are very many succulent plant materials for that concept. *Pelargonium alternans* done in a formal bonsai style, the *Pelargonium* clan *williams* styled as a formal twin trunk, and the *Bursera microphylla* in a semi-cascade form are of very traditional shapes.

Best of all the 60 year old *Operculicaria decaryi* has a trunk with a very wide base and tapering to a very small top with a very distinctive knarled bark and tiny leaves. It is a perfect example of bonsai plant stock highly sought for by bonsai traditionalists.

A close look at some more plants I have shown in another picture will reveal more of the things that are a delight to the bonsai enthusiast. Notice the brown peeling bark of the trunk of *Bursera microphylla*, the massive caudex trunk of the *Pachycormus discolor* with its brown peeling bark and the very dramatic exposed roots of the *Brachychiton rupestris*.

This article is mostly dedicated to the bonsai fancier. It demonstrates what one can do with this fresh new approach on a new bonsai material using the bonsai techniques. Now that succulent plants are readily available, the creativity of both the beginner and the experienced bonsai artist can expand and flourish as never before.

I am preparing a list of succulent plants which lend themselves to bonsai techniques, and also a list of the sources where they could be bought. To have a copy, send a self-addressed envelope to, Rudy Lime, 4328 Wightman St., San Diego, CA 92105. Any cactus and succulent nurseries who want to be included in the list of succulent bonsai sources must drop me a line with all pertinent information that they want included.

*Rudy Lime always wins blue ribbons whenever he displays his bonsai. (See illustrations of bonsai concept on back cover).*



## *A Rose Called "Peace"*

By All-America Rose Selections

With the thousands of rose species and varieties available, for one rose to be universally favored is a remarkable achievement. The rose called PEACE has rightfully earned this reputation, however.

Magnificent ivory buds top long, vigorous stems. As they open, the flowers turn a pale yellow with a pink blush at the petal edges. Add these abundantly produced flowers to robust, disease-resistant, winter-hardy plants, and you have something very special. Yet there is even more to PEACE, a quality that is the stuff of legends.

Indeed, many legends have sprung up around this plant, such as tales of budwood being smuggled out of France just steps ahead of the Germans in World War II. The fact is that PEACE has enough true historical connections to make embellishing unnecessary.

What actually happened is that the rose, bred in 1935 by Francis Meilland, one of a century-old French family of rose breeders, was

distributed commercially in Germany, Italy, and the United States. It so happened that the day the rose was christened PEACE in the States in Pasadena, California, was the day Berlin fell. Later, the rose was used to provide inspiration in the formative days of the United Nations. Dr. Ray Allen, then secretary of the American Rose Society, sent the heads of each of the 49 delegations in San Francisco a fresh bloom of PEACE.

Since then there has been a PEACE garden maintained at the United Nations headquarters in New York as well as others around the world, such as the one in Osaka, Japan, on the grounds of Expo-70. Chosen as the sole All-America Rose Selection in 1946, the hybrid tea rose with the delicate fragrance remains one of the truly outstanding rose varieties for gardens everywhere.

The American Rose Society has awarded PEACE the National Gold Medal Certificate and a near-perfect rating.



B. 'LOOKING GLASS AT THOMPSONS GREENHOUSE

PHOTO BY LAWRENCE GOLDSMITH

## NEW BEGONIAS For Southern California Gardens

By Phyllis Bates

When my husband and I first moved to San Diego, one pleasure was a walk past Montalvo Gardens near 68th Street. There was always something going on inside the lath-covered nursery, and most often it had to do with maintaining the riot of huge tuberous begonias.

Very soon we discovered Rosecroft Gardens on Point Loma where there were not only the bright big tuberous kind, but also the cane-like begonias with their angel-wing-like leaves and clusters of blossoms. One especially memorable plant did not fit either of these groups. Clouds of tiny white blossoms adorned the upper half of a begonia so tall that it brushed the overhead lath structure. Alas, we never found out its name, but it pointed the way to numerous other begonias.

Once awakened to the variety that *Begonia* encompassed, we found them in many places, including the most wonderfully diverse arrays of all at the Southern California Exposition. Many neighborhood nurseries offered good selections, and of course, that meant that lots of people were including them in their homes and gardens.

Today, begonias are not so prevalent. The general nursery will have on hand some nice bedding begonias, and these will provide long months of color for landscaping semi-shady borders and gardens. The Fair at Del Mar still includes many begonias in the garden plots, but otherwise it is much harder to locate the many different kinds of begonias.

An excellent opportunity to see a large display of begonias will occur the first weekend in September when the American Begonia Society will hold its annual national convention and show in San Diego at the Hanalei Hotel. The hobbyist-members are devoted to maintaining, improving, and conserving begonias. At their national shows there are displays of the various types of begonias to show how spectacular they can be. The general public is invited to visit the show on September 6 and 7. Begonias including the ones listed here will be sold. There are more kinds than mentioned - the diversity is amazing!

As you might guess, begonias grow well in Southern California. Most begonias came to us from cool (high altitude) tropical regions, though some are hot-climate babies. In general, the begonias thrive in shady locations here with the addition of moisture; their natural habitats are more humid. Begonias are particularly well suited for cultivation in containers, and for people living in apartments and condos or in homes with extensive patios they are ideal plants to cultivate.

Weidner's Begonia Gardens in Leucadia bring back the same splendor as the tuberous begonia displays of thirty years ago with a new twist. The array of rose, burgundy, orange, yellow and pink stretches for a full block. The dinner-plate-sized blossoms grow in a variety of forms similar to roses, carnations, camellias, and also with



ruffled and frilled margins. The gardener takes a trowel supplied at the entry, chooses the colors and forms to suit his taste, removes them from the nursery bed, and takes them home to grow in a shaded bed or 10-inch pots. Since the large-flowered hybrid tuberous are definitely among the cool, damp weather growers, coastal dwellers have the greatest success with them and enjoy the longest period of bloom.

For the last couple of years a new strain of tuberous hybrids called 'Non-stop' has been available. Horticulturists have bred tuberous begonias that will withstand hot summer days without melting away. These are ideal for those who live where temperatures routinely reach the eighties and nineties. True, the 'Non-Stops' have smaller flowers than the traditional hybrids, but there are more on each plant. The camellia- and rose-flowered 'Non-Stop' begonias come in a great choice of colors.

All begonia plants have two kinds of flowers: male or pollen producers, and female, or seed producers. The female blossoms have a winged ovary behind the petals. The male flowers are usually larger and showier than the females, but, as Evelyn Weidner says, "as in high school, there tend to be two girls going about with every boy."

The tuberous type begonias and the little pom-pom flowered bedding begonias are the only kinds with double flowers, that is, with multiple layers of petals in a flower. The spectacular tuberous blossom is large, showy, and male. The female with its characteristic winged ovary is often removed to encourage better, bigger tuberous male flowers.

Begonia 'Charm' is a sophisticated member of the bedding begonia class. It has lots of little pink single flowers (a single layer of petals), but the leaves are its showy feature. They are green and white variegated and flushed with pink to red color, depending upon growing conditions - the brighter the light, the deeper the rosy tones. 'Charm' needs protection from strong sun as do all begonias. It will grow nicely in the dappled

light from a tree, a northern location, or a patio cover. B. 'Charm' is from the already potted shade plants at Weidner's.

Although tuberous and bedding begonias are likely to be familiar to gardeners, there are several other types that are interesting and less well known. For instance, the rhizomatous begonias have a thickened stalk from which the leaf stems arise. This rhizome may creep along the top of the soil or stand upright; and it may branch and creep in several directions. The leaves may be roundish, oval, or heart-shaped, with varying degrees of lopsidedness and depth of lobes. As you may have guessed by now, with begonias there are endless combinations of small to large, light to dark, plain to complex in the forms.

Bob Ammerman, of Ferns and Foliage Nursery, has hybridized a number of rhizomatous begonias which grow extremely well in Southern California. He named Begonia 'Ada Perry' after the late garden writer for the San Diego Union. This is a sturdy plant with leaves 12" in diameter. Each leaf has five or six pointed lobes and the main veins are lighter green than the leaf surface. The leaves are lightly fluted and the surface crinkly. In the spring, clusters of pretty pink flowers from one and a half to two inches in diameter appear on stalks held above the leaves. The heavy rhizome stays on the soil surface with only shallow roots, so it grows best in a shallow pot and should be watered whenever the soil surface becomes dry.

Another of Ammerman's rhizomatous varieties

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that will grow extremely well in the Southland is **Begonia** 'Brown Sugar'. The leaves of this begonia are dark green, leathery, and marked by a star burst of eight to ten heavy, pale green veins. The underside is fiery, deep red. New leaves are the color of brown sugar until half mature. The light pink flowers form clusters in the same fashion as **B. 'Ada Perry'**, well above the leaves. Blooming of rhizomatous begonias is triggered by long nights and so the flowers appear in late winter through spring and early summer.

An intriguing offshoot of the rhizomatous group are those whose leaves are marked by colored patterns, the rex begonias. The leaves are so spectacular that often the growers simply cut off the flower stalks so they will not detract from the beauty of the leaves. The rexes, as a group, have had a reputation for being "difficult" so that when a strong hybrid comes along, it is desirable to spread the word about it.

A quite new hybrid in this rex group has proved to be a good grower for Southern California. It grows outside under shade cloth in Vista and is doing well as a container plant. Developed by Mabel Corwin and available at Kartuz Nursery, **Begonia** 'Chocolate Creme' grows into a nice full plant. The leaves are milk chocolate colored and are patterned with pale tan taffy spots.

Michael Kartuz also has two species begonias to recommend. These plants can be found in the wild - if their habitats are still undisturbed. **Begonia macduffiana** was named for Thomas McDuffy, now a Southern Californian, on a trip to the headwaters of the Amazon River. It is a tall begonia, with cane-like stems, some upright, some arching. The leaves are elongated pointed ovals of green along the tall stems. The intensely scarlet flowers hang in clusters, with best bloom occurring in summer and fall. Plants grow best in locations that are bright but protected by shade, a must during hottest times of the day. They can be planted directly in the ground. It is possible to grow **B. macduffiana** in a hanging wire basket if all the stiff upright canes are trimmed away.

The second species does not yet have a name. A rhizomatous begonia from the Philippines, it was imported several years ago by Martin Johnson of the Bay area. Mike Kartuz says the plants develop rapidly and readily here. In Manila, the plants were used for border plantings and also for container growing. The rounded leaves on this one are pink with only the areas outlining the main leaf veins being deep olive green. A rhizomatous begonia, it is very pretty, and can be grown as a house or patio plant since it is of small size.

Another cane-like begonia that is to be recommended is **B. 'Looking Glass'**, a hybrid cross made by Patrick Worley of the Plant Kingdom, a mail order nursery in National City. This compact plant of medium height has been grown in pots and carried to flower shows throughout the country. In Southern California, the pots can be kept outdoors or the plant put directly in the ground. The tall stalks tend to lose their leaves in winter, but

should then be trimmed off so new ones can grow straight and strong for the next year. The leaves are handsome, large and silvery. This is the "most silver cane" of all, with only the vein area being green. The flowers are sparse, and the leaves are its outstanding feature. This plant has been awarded numerous blue ribbons in flower shows throughout the United States for different growers.

One last suggestion, a completely different type of begonia from the others mentioned, is **B. 'Orococo'**. The succulent stems lie close to the ground. It therefore is ideal for low light (not dark, however) situations where a blooming ground cover is desired. The leaves are shiny golden green with red shading toward the outer edges and a thin red margin. The ground should be kept evenly moist to maintain the succulence and pretty color. Sprays of tiny white flowers form in summer to fall. 'Orococo' has been grown in a wire basket, in a pot supported on a moss pole, under fluorescent lights, and under the nursery benches. This hybrid won the award as the Best New Begonia Commercial Introduction in 1982 for hybridizer Patrick Worley.

The sources for suggested begonias: Weidner's Begonia Gardens, 695 Normandy Road, Encinitas; Ferns and Foliage Nursery, 1770 Foothill Drive, Vista; Kartuz Greenhouses, 1408 Sunset Drive, Vista; and the Plant Kingdom, Box 7273, National City. Weidner's and Kartuz's nurseries are open to the public; call to make arrangements to visit Ferns and Foliage or the Plant Kingdom.

*Phyllis Bates is editor of the Begonian and of LAIFS Fern Journal. She and her husband, Edgar, live in Encinitas.*

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# LETTUCE AND ENDIVE

By Eleanore Macy

In very coastal areas, lettuce will produce 12 months a year. In more interior climates which experience more frequent winter frosts, endive is better grown through the winter than lettuce. Looseleaf types are usually much easier to grow than heading lettuces. Iceberg types require much richer soil, careful and early thinning, and good weather. Still, with the best of conditions, a percentage of the crop always fails to head nicely.

## CULTURE:

Lettuce requires moderately good soil which is rich in nitrogen. It is moderately frost hardy but it won't stand up to chilly, rainy weather for long. Generally, lettuce is best planted from January through August. Along the coast, planting can also be done from September through December. We recommend planting endive in August in cooler interior valleys, for when it matures in the cooler weather of winter it is fairly sweet. Sow the seeds 1/4" - 1/2" deep in rows at least 12" apart. Thin early to about 8" for looseleaves, and at least 16" apart for heading types. It is important to thin heading lettuces early. It is very useful to side dress lettuce once with a high nitrogen fertilizer like blood meal after thinning. Make successive plantings about 6 weeks apart for looseleaves and about 3 weeks apart for heading types. Six seedlings of loose leaf lettuce per 5 gal. container on your sunny deck or patio planted every 10 days will keep you in lettuce most of the year. A single planting of endive in the fall will be harvestable through the winter.

## INSECT AND DISEASES:

Mosaic is a disease endemic to California. It is transmitted by the seed itself. Mosaic-indexed seed (MI) comes from fields with very low levels of affected plants. This kind of certified seed costs quite a bit more, but is well worth the price.

## HARVEST:

With looseleaves, cut off single leaves from the outside of the plant as needed. This way a single planting produces for quite a while before bolting or getting bitter. With crispheads, cut the entire head when it is full-sized and firm.

## TYPES OF LETTUCE AND ENDIVE

**RED SAILS:** 45 days. 1985 All-America Selections Winner. Loose-leafed, bronze-red, high productivity, high nutritional content. Crinkled leaves spread about 12-15" and reach to 6-8".

**WALDEMANN GREEN:** 63-67 days. A loose leaf type with medium large heads, long-frilled wavy leaves, dark green in color. Crisp, tender and mild-flavored. Not bitter. Popular as market lettuce, excellent for home gardening.

**CALMAR MI:** 75 days. A Great Lakes strain resistant to most of the mildews and tolerant to tip-burn. Calmar produces large, medium-green heads, which are very solid. It was a joint development by U.C. and the U.S.D.A., and was the standard of the coastal lettuce-growing industry for many years. Recently Calmar has been largely replaced with newer types which offer growers advantages, but which we feel have less flavor. Recommended by U.C. for home gardens.

**MONTEMAR MI:** 73 days. Montemar is slightly quicker-growing and more tolerant to heat than Calmar. Otherwise similar in appearance and disease resistance. We recommend this variety for growing during summer heat in the more interior areas in Southern California. Recommended also by U.C. San Diego Extension.

**BIBB (Boston/Butter Type):** 60 days. Pleasant, distinct flavor. Compact head with thick, smooth leaves that are deep waxy green. Stand-by table favorite.

**BUTTERCRUNCH:** 70 days. Similar to bibb lettuce types, but Buttercrunch grows larger and the head is more compacted. It is also much more heat resistant than any bibb type, and grows well in cool weather, too. Buttercrunch is our favorite lettuce and will probably be yours, too. The flavor is very sweet and crunchy. Combining almost every possible good feature of a small lettuce. Buttercrunch was made an All American Award Selection and is recommended by U.C.

**PRIZEHEAD MI:** 55 days. Light green, crinkled leaves are red-tipped. A popular variety in the supermarket because it never gets bitter (until it is very old and overly large). Recommended by U.C.

**SALAD BOWL MI:** 48 days. Large, lime green rosettes which resist bolting well, so the leaves can be snipped as needed for six weeks or longer. The flavor is sweet and stays that way in hot weather. Recommended by U.C.

**BROAD LEAVED BATAVIAN:** 80 days. Endive is very frost hardy and should be used for late summer plantings. Batavian has large, full, deep green heads with long, broad-ruffled leaves. The center leaves blanch white automatically and are sweet tasting. The colder the winter gets, the sweeter the endive becomes. Endive can stand in the field for a considerable amount of time in the fall or early winter, waiting for harvest. Recommended by U.C.

**VALMAIN MI:** 68 days. Over 10" tall heads are slightly savoyed with a dark green color. The center of the head is creamy yellow and fairly sweet. Recommended by U.C.

**OAKLEAF:** 55 days. Medium large, deeply notched, oak leaf-shaped lettuce. This is one of our favorite looseleaf lettuces because of the sweet taste. Recommended by U.C.

*Eleanore Macy is President of California Gardeners Seed Company, 904 Silver Spur Road, Suite 414, Rolling Hills Estates, CA 90274.*





By Tineke Wilders

You may not think of a bathroom as a place to grow plants, but once you add a little greenery to this frequently used room, you will be delighted with the result.

If you have at least one window in your bathroom, you are fortunate, but even without windows you can still grow some plants.

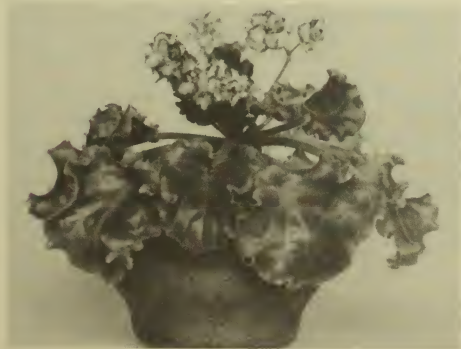
Suitable spots for plants can be window sills or ledges, shelf-units (the ones used for towels), even a wicker tray inside a macrame hanger suspended from the ceiling.

When it comes to selecting the plants, choose the ones that will appreciate the high humidity, since daily showers will supply this free of charge. Think for example of lush ferns, and not only Boston ferns, but the dainty Maidenhair fern (*Adiantum*), which will only survive in high humidity, or the button fern (*Pellaea*).

#### Multi-colored Croton

Prayer plants (*Maranta*), the Zebra plant (*Aphelandra*) and the multi-colored Croton (*Codiaeum*) will also thrive.

Flowering seasonal plants are always a



welcome color accent for the bathroom. You may even find colors to complement your towels and other accessories. Depending on the time of the year, you can get flowering bulbs, such as tulips, hyacinth and crocus in the early spring, followed by Primula, Cineraria, begonias, miniature roses, mums and azaleas, just to mention a few. Remember though, that most of these seasonal plants are best treated as "disposables"; as soon as they quit blooming after a couple of weeks, they should be discarded and replaced.

Another plant which is suitable for bathrooms is the Egyptian paperplant (*Cyperus alternifolius*), a true aquatic plant which should be grown in very wet soil or sitting directly in water and pebbles (the pebbles are to anchor the roots). It too loves the high humidity and grows best in a bright spot, out of the direct sun.

Gesneriads are a group of plants to which the always popular African violets belong, along with the lipstick plant and the goldfish plant. They all love the humidity and are happy in a spot out of the direct sun, unless it's an early morning sun. So even a small northern window would be great for these lovely plants.

A large brandy snifter could be an excellent environment for such groundcovers as Babytears (*Helxine*) and Irish Moss (*Selaginella*), along with some small table ferns (*Pteris*).

For a plant which gives off a fresh natural scent whenever the leaves are touched, adopt a scented-leaf geranium. A variety of scents are available, from lemon, apple, filbert, rose, to cinnamon and nutmeg. To me this is a much healthier method of deodorizing a bathroom than the pressurized spray cans.

**No window?** Don't despair, because you will still be able to keep some greenery, even though there won't be fast growth. I have had good luck with growing the yam (or sweet potato) in a jar of water, just like you grow an avocado pit. Within a couple of weeks, a climbing vine will emerge. The potato contains enough food to grow foliage for a couple of months. By the time the vine starts to turn yellow, start another one, or start them in stages for a constant growing vine. If you place the jar in front of a mirror, the reflection will double the effect.

You can also use dried flower arrangements, which of course don't need light or water. See your local florist, who can make up an arrangement to complement your color scheme.

#### Silk flowers

You can even find silk flowers and plants and preserved foliage which are ideal for any dark or low light area. They don't need water and light, but they do collect dust.

If you have enough space in your bathroom, palms will look smashing, as well as hanging plants in front of a window.

You see, you can grow plants anywhere in your house, even in the bathroom!

# The Gardens At La Purisima

By Al Thompson

Out of the 960 acres which encompass La Purisima Mission State Historic Park in Lompoc, California, plants can be grouped into two broad categories: those both native and introduced cultivated for landscape and garden use, and those almost entirely still within their native habitat. Since interpretation at the mission is of mission life in 1820, the garden specimens represent plants at that point of history. The natives are those uniquely found within the juxtaposing of two major plant zones.

The garden at La Purisima is one of the most extensive of any mission, but is not meant to be an authentic reproduction of the original surroundings of the mission structures. Rather it represents plants introduced during the settlement of early California by Spanish padres and settlers, and native plants known to this mission's Chumash Indian residents. These plants, known for their useful properties as food, medicine, and raw materials, often blend the knowledge of several cultures. The list is extensive and often gives new information of California's past to visitors.

Two other gardens are maintained by mission docents, one an herb garden on the edge of the main garden, and the other a vegetable garden farther north. The herb plan separates the culinary herbs, the aromatic and medicinal herbs, the mints and herbal teas, and the field plants or wild herbs still growing along paths and hillsides of the mission



LA PURISIMA MISSION, LOMPOC, CA — PHOTO BY WILBUR GLOVER

grounds today. The vegetables, a display of a typical food garden, are planted and maintained by docents, and are harvested for use by mission personnel and docents both for private use and the preparation of food on special mission days.

Of more interest to the students of botany are the indigenous plants along the eleven and a half miles of trail and those among the hills. Since a transition of northerly and southerly zones occurs in this area, a diversity of species not often duplicated is documented. The eastern end of the Burton Mesa, a land feature known for its array of native species, falls within park boundaries. Once again the list of plants is extensive.

Since La Purisima is not a church, but a living museum, preservation of all plants is a concern both of mission rangers and docents, and the general public as well. The grounds are open to anyone who observes the basic rules of preservation, and the mission continues to invite the public into a setting where time stands still and the world is serene.

*Al Thompson is a Mission docent who guided one of our groups on the Lompoc Tour recently. He is President of the Lompoc Valley Botanic and Horticultural Society and also on the Beautification Commission to the City of Lompoc.*

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# Everyone Can Enjoy Flower Arranging

By Martha Rosenberg

Flower Arranging is, literally, a pastime for all ages! Call it an art, call it a craft, call it a hobby — it is all of these — and more. IT'S FUN! Try it and you will see.

Small children love to pick flowers and put them in a glass of water. A man will cut a rose or some especially nice bloom in his garden, bring it into the house, put it in a vase and, proudly, present it to his favorite lady. A hostess would think her dinner table incomplete without flowers; children take flowers to their teacher; a secretary likes a flower on her desk — and may even take one to her boss.

My point is, people love flowers and use them to beautify their surroundings and make their area a more pleasant place.

PHOTO BY WILBUR GLOVER



PHOTO BY PAT ZIEBARTH

So why not present your flowers in the starring role they deserve? It only takes a few moments longer.

For instance, usually you cut a lovely, fresh, pink camellia, float it in a bowl of water and put it on the coffee table. Pretty isn't it? But take the same pink camellia, tuck some dark green, glossy camellia leaves under the bloom, in a half circle, and put the whole thing in an amethyst glass ash tray. Better? Of course it is!

You have just made a flower arrangement. True, it's about as simple a flower arrangement as you are likely to make — but you have taken your plant material and created a design. That, in a nut-shell, is what flower arranging is all about. Your camellia is now a star!

Actually, the theory of flower arranging is almost that simple. Using plant material to create a design is the basic thought you keep in mind. The trick is in making it a good design.

There are guidelines and suggestions to help you. A good many people have written a good many books and articles on how to become a competent flower arranger. It is possible to learn flower arranging from books — but, personally, I favor a broad education through lessons in small classes; workshops; demonstration programs by



*Learning floral arranging can bring  
much happiness . . . the joy of  
doing . . . the thrill of the  
competitions . . . the  
beauty of beholding!*



PHOTOGRAPHS BY  
WILBUR GLOVER

talented arrangers; and by relying on books for fundamental information and reference. Books with lots of illustrations are very good for jogging your memory and keeping your interest alive. Expose yourself to all these opportunities — as many of them, and as often as you can. I think you will find you gain something from each one.

But, mainly, you learn most from practice, once you have learned the fundamentals.

The principles of art used in making a good design are the same in flower arranging as in any other art: balance, rhythm, proportion, scale, dominance and contrast. To try to explain these in a short article would be both foolish and dull. You learn to recognize these principles by reading books, attending demonstrations and most certainly by taking lessons and workshops. You learn to apply them by practicing, especially under supervision of a teacher.

There is a variety of reasons why people take up flower arranging. Some are looking for a hobby; some like the challenge and competition of entering an arrangement in a flower show; and some want to learn to make more attractive arrangements for their homes. All of them can reach their goals faster if they have some instruction.

I would be the first to admit that there is nothing unattractive about a bunch of pretty, fresh flowers in any kind of a container. How can pretty, fresh flowers be unattractive? But we all know that sometimes they look better than at other times. We are just not sure why. A good teacher can not only tell you why but can also tell you how to fix it. The camaraderie of fellow students all interested in the same thing; the interchange of ideas (to say nothing of the swapping of materials); are some of the added benefits. It's a warm and friendly experience.

If something in this article hasn't sparked an interest in flower arranging, then you just stick to putting your flowers in water any old way — but you will have missed something!!

*Martha Rosenberg teaches flower arranging classes for San Diego Floral Association periodically.*

# Some Familiar Mesembryanthemums

By Dorothy Dunn

The **Mesembryanthemaceae** of South Africa comprise one of the largest of all the groups of succulent plants. Jacobsen describes about 123 genera and somewhere between 2,000 to 2,500 species; however, some authorities are now attempting to reduce and combine this somewhat unwieldy bulk into something more manageable. The name **Mesembryanthemum** means "midday flower", and refers to the fact that the flowers of many species do not open until afternoon. They are often also called "flowering stones". Apparently the seed structure (rather than the flower) is the most important factor in determining genera in this particular group of plants, for according to John A. Jump (*Cactus and Succulent Journal of America*, July-August, 1963): "The intricate construction of the fruit of the family **Mesembryanthemaceae** has intrigued students of this group of plants for many decades. Its tendency to vary in structure from one genus to another of the family provides an important basis for taxonomic distinctions in this group of succulents in which differences in flower structure are frequently not suitable criteria for identification". Due to the unusual structure of the seed capsule, rainfall, or even heavy dew, is an important factor in seed dispersal and the successful reproduction of many species. It is among this group of plants that we find many of the fantastic and amazing mimicry plants of South Africa, as well as some of the more pronounced "windowed" plants such as **Fenestraria** and **Frithia**. Most of them are also noted for the profusion, brilliancy, and silky sheen of their flowers. Some species reportedly contain a poisonous alkaloid.

One of the most familiar and beloved genera of all the **Mesembryanthemaceae** is undoubtedly **Faucaria**. This is a genus of about 35 species coming mainly from the Karroo and the eastern parts of the Cape. The name is derived from the Latin **faux**, meaning "jaws" (**Faucaria** = "a collection of jaws"); hence, we have **F. tigrina** ("Tiger's Jaws"), **F. lupina** ("Wolves' Jaws"), and **F. felina** ("Cat's Jaws"). These plants consist of small, almost stemless rosettes, branching with age to form a mat. The topmost pair of the densely-crowded fleshy, thick leaves does indeed resemble the gaping jaws of some animal, complete with teeth. **Faucarias** are among the hardiest of all the **Mesembryanthemums**, and are easily grown from seed.



**FAUCARIA TUBERCULOSA**  
(*Mesembryanthemum*)

PHOTO BY  
WILBUR GLOVER

**Fenestrarias** are extremely succulent plants with clavate leaves which are translucent at the tips. They come from the coastal sand dunes of Southwest Africa, where they grow buried in their windowed tips. The name is from the Latin **fenestra** ("window"), and **Fenestraria** means simply "a number of windows". You will frequently hear the plant referred to by its common - and not terribly appropriate - name "Baby's Toes". There are only two species - **F. aurantiaca**, the type species - and **F. rhopalophylla**, which is considered to be merely a variety by some experts. **Fenestrarias** resent re-potting, and will rot with great enthusiasm if overwatered. Propagation is generally from seed, although careful division, or even leaf cuttings have been advocated by some growers.

**Frithia** is a monotypic genus consisting of the one species **F. pulchra**. It was named for its discoverer Fred Frith, a South African succulent collector, and the specific name **pulchra** means "beautiful". Superficially it resembles **Fenestraria** (when not in bloom), but is not closely related.

**Frithias** occur in an area of relatively high summer rainfall; their habitat is cold in winter and heavy frosts are not unusual. They grow wedged in rock crevices, and when not in bloom it is almost impossible to locate them between the quartzite stones of their habitat. The flowers are bright magenta shading to white in the center, and may last for two or three weeks. They are more difficult to grow than **Fenestrarias**, and propagation is by seed only.

**Lapidaria** is another monotypic genus, and its single species **L. margaretae**, is native to the deserts of Great Namaqualand in Southwest Africa, near Warmbad. Its name comes from the Latin **lapis** ("stone"), and **Lapidaria Argyroderma** and then **Dinteranthus**. It is a perennial dwarf rosette plant with six to eight leaves of particularly lovely, jewel-like coloration, and yellow flowers. It grows readily from seed, but should be kept relatively dry during the summer months.

**Neohenricia** is yet another monotypic genus whose one species, **N. sibbettii**, was named in honor of Dr. M. Henrici who discovered it in 1930. This is a tiny, charming species with a flat, mat-like growth habit, and tiny white nocturnal flowers which open at dusk. It will not tolerate frost. Propagation is by seed or division of the clumps.

The genus **Pleiospilos** contains about 35 species, all native to the Cape Province, the Great Karroo, or the Orange Free State. The name is derived from the Greek **pleios** = "full" and **spilos** = "dots" or "speckles". They are often called "Split Rocks" or "Living Granite", and the type species is **P. bolusii**. They were previously classified under the genus **Punctillaria**. They are dwarf stemless succulent perennials with yellow to orange-colored flowers which often have the scent of coconut. They are easily raised from seed.

**Titanopsis** is a genus of six species. The name comes from the Greek **titanos** = "chalk" (referring to the calcareous appearance of the leaves) and **opsis** = "appearance". They come from the southern part of Southwest Africa, and the type species is **T. calcarea**. In habitat it is very difficult to find these plants between the small limestones where they grow. The presence of raised, calcareous "pustules" on the leaves is a particular characteristic of species in this genus. The flowers are yellow. **Titanopsis** are easily propagated from seed, which germinates readily, and the majority of plants will flower for the first time in one growing season. Also, plants consisting of more than one rosette can be divided. You will often hear the names **Titanopsis**, **Aloinopsis**, and **Nananthus** used rather interchangeably, since some of the species have been banded back and forth between all three genera.



**TITANOPSIS CALCAREA**  
(Mesenberg Southern)

PHOTO BY WILBUR GLOVER

The cultivation of these plants is comparatively simple if a few basic ground rules are observed. They require very bright conditions - too much shading will result in etiolation, loss of the lovely glaucous bloom on the epidermis, and few, if any, flowers. Good air circulation is important, and careful watering tailored to their specific growing season, which is usually our fall and winter.

Literature cited:

Barkhuizen, B.P.:

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Haselton, Scott: **Succulents for the Amateur**  
Herre, Hans: **Genera of the Mesembryanthemaceae**  
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**The Illustrated Encyclopedia of Succulents**



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# THE CUCURBITA PUZZLE:

## IS IT A PUMPKIN OR A SQUASH?

The genetic history of the pumpkin is so intertwined with the squash and the gourd that it's sometimes difficult to tell them apart. Exactly what is a squash and what is a pumpkin?

According to Donna Carlson, horticultural specialist at Gurney Seed & Nursery Company in Yankton, South Dakota, the easiest answer to that question can be attributed to a University of Illinois professor who said a pumpkin is something you carve, a squash is something you cook and a gourd is something you look at. Though it's really not that simple, it's also not that difficult. The answer, Carlson says, is in the stem.

Pumpkins and squashes and gourds all belong to the same genetic family — *Cucurbita*. Within that family are several species or subgroups — *Cucurbita pepo*, *Cucurbita maxima* and *Cucurbita moschata*.

The *pepo* species is usually recognized as the true pumpkin. Varieties within this group have bright orange skin and hard, woody, distinctly furrowed stems — like 'Connecticut Field', 'Jack-O-Lantern' and 'Small Sugar', for example. But the group also includes gourds, vegetable marrow, Pattypan summer squash, scallop summer squash, gray and black zucchini and summer crookneck squash.

The *maxima* species also contains varieties that produce pumpkin-like fruit but the skin is usually more yellow than orange and the stems are soft and spongy or corky, without ridges and without an enlargement next to the fruit. They don't really make good handles for jack-o-lanterns. 'Atlantic Giant', 'Big Max' and 'Show King' are often listed as pumpkins but are more properly called pumpkin-squash or squash-type pumpkins. In any case, Carlson says they may not be accepted as entries in a largest-pumpkin contest by a county fair board since they aren't true pumpkins. Other members of the *maxima* group are Hubbard squashes, banana squashes, buttercup squashes and turban squashes — in short, most autumn and winter squash.

Finally, there's the *moschata* species. Varieties in this group are usually long and oblong instead of round and have tan rather than orange skin. The stems are deeply ridged and enlarged next to the fruit. Ironically, a member of this group is used for much of the canned pumpkin sold in this country. Other non-pumpkin members include the squash-like cushaw, winter crookneck squash and butternut squash.

Genetics and county fair contests aside, if you can grow squash, you can grow pumpkins.

All *Cucurbitas* are sensitive to frost and should be planted in fertile, well-drained soil after the weather is settled. The plants are notorious feeders, so work plenty of rich compost into the soil before planting. They also love to drink, so be prepared to give them lots of water. Plant 4-5 seeds in hills 6 to 8 feet apart and cover them with 1 inch of soil. Thin to the 2 strongest plants when the seedlings are 2 inches tall. To keep the plants within the confines of the garden, cut off the end of the vine when it's traveled as far as it should go. And to grow a really big pumpkin (or squash, for that matter), remove all but 1 or 2 of the fruits from the vine. That way, the plant's energy will go into quality not quantity. Just remember: it has to have a hard, ridged handle if it's going to be accepted without question in the county fair's pumpkin contest.

And one last bit of information about the *Cucurbita* family. Summer squash, winter squash, gourds and pumpkins will regularly cross-pollinate each other in the garden if they're members of the same *Cucurbita* species. The fruit that results from the initial cross will look and taste exactly like the variety that was planted, but there the resemblance will cease. The seeds in the fruit will carry the genes of their mixed parentage. If those seeds are planted, there's no telling what kind of a squash-pumpkin-gourd mongrel will result.

That's why garden-seed companies recommend that you plant only certified garden seed and not seeds from last year's garden produce. Most seed companies, grow their seed crops in isolation so unwanted cross-pollination doesn't occur. That's the only way to assure that the seeds you plant will produce the fruits described in the catalog or on the seed packet.

If you're interested in growing prize-winning pumpkins or just ordinary squash and gourds, you'll find a large selection of varieties in seed catalogs.

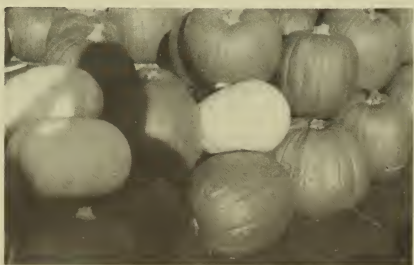


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# Take The Agony Out Of Agronomy

By Patrick Shields

"Our climate here is wonderful, but I have terrible soil", is a statement I hear from most gardeners and they are right. We grow flowers and vegetables the year-round in our mild winter climate, but our soil is a mineral soil with a high pH. The quality and quantity of our plants is limited to the grade of soil we have in our garden plots.

We can't control our climate and we can't improve the water supply, but we certainly can improve the soil in our yards by observing a few simple rules that will actually mean less work and effort. In our part of the country, our soils lack organic matter and certain nutrients for optimum germination and growth.

Soil improvement is a continuous program here. We read eastern garden books and magazine articles about gardeners applying soil amendments and animal manures to soil in the late fall or winter months. But they don't grow beets, lettuce, or snapdragons and pansies in November or December like we can. And their climate of freezing and thawing temperatures which grind these soil amendments into the ground, we don't have. So how can we best improve our soil?

Adding compost and nutrients to our garden beds is the best way to improve plant growth. Everyone agrees to that, but how we add these amendments is the important question. Don't make the mistake of grabbing a rototiller and mixing bags of soil amendments into the top six inches of soil. You'll be throwing away money and expending a lot of sweat, time, and muscle energy without much success at soil improvement.

Plowing this land develops a compacted layer and compresses the soil, so don't buy or rent a rototiller. Use that money for purchasing bags of soil amendment, composts, and perlite. Stepping on your growing beds can compact the soil more than driving through it in a medium tank. Tanks compress soil at 11 pounds per square inch. You compact it at more than 50 pounds per square inch. So design your growing areas four feet wide to avoid compaction and annual restructuring your growing areas. Four foot wide beds make it easy to reach any plant to feed, prune, or harvest. Because I never step in the bed I only have to dig it up once and that is the initial time I establish the bed.

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I never plant in rows. I plant in blocks. Planting in rows is for the commercial farmer and that is only a couple hundred years old. Row planting developed with the invention of the steel plow and has two negative features; (1) plowing or rototilling at the same depth develops a compacted layer (tillage pan) where the bottom of the plow slides over and compresses the soil. This hard layer can actually form a barrier that prevents water and roots from going deeper, (2) Rows waste space and provide weeds a place to germinate and grow. These weeds steal nutrients and moisture from your flowers and vegetables.

By growing in blocks I harvest twice as many plants and use less water and fertilizer.

For example, when I plant corn, the directions say to plant 12 inches apart in rows 30 inches apart. If corn grows 12 inches apart one direction, why 30 inches apart in the other direction? That's 30 inches of unused weed area I am not using. I plant my corn in four foot by eight foot beds one foot apart in both directions, meaning 32 beautiful stalks or corn bearing 35 to 40 big juicy ears of Silver Queen. I weed this area the first month, but after that the stalks shade out the weeds and they quickly die for lack of sun. Oh yes, my total weeding time this first month is less than 12 minutes because I use a sophisticated machine called index finger and thumb weed-puller.

I plant salvia and marigold flowers the same way. Directions on the package say to thin them to twelve inches apart. So why not plant the seeds twelve inches apart to start with and save valuable time and effort which can be used for other chores?

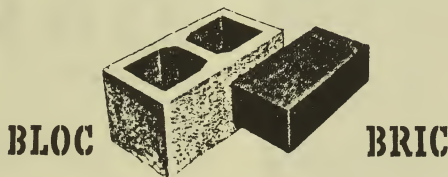
But lets get back to the subject on how to take the agony out of agromony. I prepare my garden beds only once. I have beds that I prepared six years ago and have not tilled since. I use the method developed 2,000 years ago by the Chinese, improved by the French intensive gardeners 200 years ago, and perfected by Mel Bartholomew, the Square Foot Gardener. It's called double-digging.

On a four by eight foot plot I distribute a half a bag of perlite, two large bags of potting soil or mulch, and one pound of 5-10-5 acid type granular fertilizer. The perlite improves the soil so it will hold water longer if it's sandy, or break up clay soil and hold oxygen. The humus promotes microbe activity and stabilizes soil temperatures, (cooler in the summer and warmer in the winter). By spreading out the fertilizer on the soil's surface before double-digging, I get the phosphoric acid down in the root area where it will stay for years.

I then dig a trench across one end of the bed one foot wide, one foot deep, and four feet long. I place this dirt in a wheelbarrow or garden cart. With a spading fork I insert it at intervals on the bottom of the trench and wiggle it back

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and forth to loosen and move the soil. Then I dig up another row of soil one foot wide, one foot deep across the bed, but I toss this into the first trench. Again I loosen the bottom soil in the new trench and fill it up in turn as I move backward toward the other end of the planting bed. As I toss the last row of soil into the ditch, I move the soil in the cart to the end, and fill in the last ditch. I then rake it smooth and plant.

Using this method of double-digging, I have improved the physical properties of the soil such as: texture, structure, density, porosity, consistency, temperature, and water content more than 20 inches in depth. I have also furnished it with nutrients, and lowered the pH to a degree that plants love, all in one simple operation called double-digging.

The agony is over. Now you can move on to the ecstasy of low-maintenance gardening. You will realize the bliss of growing large crops of vegetables and brilliant blooms of flowers. From now on, if you add small amounts of fertilizer and humus, don't step on the growing area, plant seedlings close together, and the rapture of horticulture will stay with you the rest of your life.

#### Books to read for further information:

Rodale Press, Inc.

"The Encyclopedia of Organic Gardening"

Donahue, Miller, Shickluna

"Soils, an Introduction to Soils and Plant Growth"

Barthelomew, Mel

"Square Foot Gardening"



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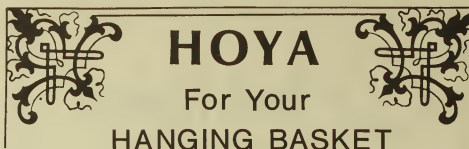
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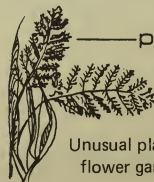
Hoya, also known as the wax plant, is an evergreen, perennial twining vine and also a small shrub. If you live in a warm, frostless climate, you can plant hoya outdoors but they are also planted in the home for decoration.

The common wax plant, *Hoya carnosa*, is an old-time favorite vining plant which can reach ultimate heights of six to eight feet. Its pink-tinged, white flowers are about a half inch in diameter and are fragrant. Varieties of *Hoya carnosa* offer leaves marbled with two tones of green or curiously contorted leaves that overlap each other such as found in 'Krinkle Kurl' which is also known as the Hindu rope plant. Other choices have leaves with green centers and white, cream, pink or red margins or bluish green leaves which are margined with creamy white and sometimes pink.

A very different Hoya is *H. bella* which is not only exquisite in appearance but deliciously fragrant in bloom. It is considered a low shrub whose branches when young are erect but soon droop over as they reach 1 1/2 feet in length. Its blooms are many in a flat umbel and are white in color with a rose to purple center.

You will find Hoyas a delight in a hanging basket. They need a loose, well draining soil that contains a good amount of coarse organic matter, like compost or leaf mold, combined with coarse sand or perlite to keep it porous. Indoors, a winter night temperature of 50 to 55 degrees F. is adequate and during the day, temperatures five to ten degrees warmer will do. This plant needs a high intensity of light and its soil should be kept evenly moist. Diluted feedings of fertilizer are also helpful during the spring and fall. In the winter, the soil can be kept drier and feedings stopped.

The stalks of the Hoya plant produce blooms for more than just one year. So removing only the faded blooms is recommended.



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## Book Reviews

By Mary Lou Orphey

**DEERFIELD, An American Garden Through Four Seasons**, by Derek Fell. 1986 Pidcock press. Distributed by International Specialized Book Services, Inc., 5602 N.E. Hassalo Street, Portland, Oregon 97213-3640. 10 x 10 in. hardcover 96 pages \$35.00 plus \$2.25 for handling and postage.

One of the most beautiful private country estates in America, Deerfield is a fifty acre paradise located near Philadelphia. There are twenty-two acres of lawn, 7,000 azaleas, over a hundred different kinds of trees, over 2500 feet of fencing, over 2000 feet of stone walls, over 4600 wide paths, 4500 feet of paved roads, and enough beauty to fill one's heart with joy.

Derek Fell, an internationally acclaimed writer and photographer, follows the seasons at Deerfield: Spring finds azaleas, rhododendrons, peonies, roses, foxgloves, lupines and columbine in bloom. Summer is the time of lilies, hosta, black-eyed Susans, pink stonecrop, roses and chrysanthemum. Autumn begins around the middle of August and one sees the sumac, Japanese maples, burning bush, black tupelos and tulip poplars turn to vivid reds, flame orange and shades of yellow. In winter, the branches of barren trees are laden with snow. One sees their reflections in Deerfield pond; it is a reminder of old Currier and Ives lithographs of winters past.

Deerfield would be a splendid place to visit. Although not open to the public, purchasing the book entitles one to visit at the height of the azalea season; but one must write for an invitation in advance. See details in the book. In addition, the book about Deerfield is exquisite. Filled with beautiful photographs and descriptive text, the book would be a lovely gift for oneself or a friend.

**THE MACMILLAN BOOK OF BONSAI** by Horst Daute. 1986 Collier Books, Macmillan Publishing Company, 866 Third Avenue, New York, NY 10022 5 x 7 1/2 in. 128 pages paperback \$6.95.

What makes a good bonsai? The roots, trunk, bark, limbs and branches, foliage, moss, and pots must meet certain standards as discussed in the chapter on origins and fundamentals of bonsai. The discussion on styling clearly outlines the most popular bonsai styles and lists the trees most suitable to each style. The guide to cultivating the most popular bonsai plants includes needle evergreens, deciduous trees, and flowering and fruit bearing plants.

Anyone interested in the fascinating hobby of growing bonsai will benefit from this well-written paperback.

**LANDSCAPING WITH PERENNIALS** by Emily Brown. 1956. Timber Press 304 pages. Distributed by International Specialized Book Services, Inc., 5603 N.E. Hassalo Street, Portland, Oregon 97213-3640. 8 1/2 x 11 in. 304 pages hardcover \$34.95 plus shipping \$2.50 for 1st book, \$1.50 for each additional book.

This is a heavy-weight book for gardeners and horticulturalists. Encyclopaedic in scope, it is an excellent reference book. The author begins with the basics - the form of the plant and leaf, color of foliage, and color of the flower.

Interested in creating a woodland garden? Having trouble planting a sloping site? Interested in planning an outdoor room? Want a perennial border? Find the answer to these questions and more in Sections II and III of this splendid book. Line drawings on every page show flower and leaf patterns. Fourteen sample layouts for using perennials include Sun Against a Hedge, Rectangle, Corner with an Oriental Feeling, North Shade, and Island in the Sun. All are drawn in quarter inch scale and are meant to be guidelines for the use of perennials in the garden.

There is advice on pruning, water, soil, feeding, weeding, pest control, insects and diseases, planting and propagation. There are lists of flowers by color, by habit, by preference, annuals to use with perennials, perennials which self-sow, use of bulbs with perennials, neat growers, use of grasses with perennials, subshrubs, and perennials for ground covers.

It is particularly helpful that the growing habit and mature size of each perennial is carefully detailed.

**THE WATER GARDEN, A guide to designing, installing, and planting ornamental and natural water features for any garden**, by Anthony Paul and Yvonne Rees. 1986 Viking, 40 West 23 Street, New York, NY 10010. 8 3/4 x 8 3/4 in. 167 pages. Penguin paperback \$14.95 Viking hardcover \$27.50.

THE WATER GARDEN has lots of advice on choosing a water feature, moving water, bridges, paving and lighting. It discusses what plants to put around and in the water, and practical advice on construction of water gardens. Information on planning for wildlife and what fish to stock and advice on maintaining an ecological balance is also included.

Whether it be a swimming pool, fountain or pond, water adds an extra dimension to a garden. There are detailed plans for an oriental decked garden, a semi-wild water garden, lagoon and spa., formal pool, canal-style garden, tranquil city garden, large natural garden and natural swimming pool.

The authors have made good use of color photographs and diagrams. Anyone interested in having a water garden or improving an existing one will benefit from reading THE WATER GARDEN.

**ENGLISH HERB GARDENS** by Guy Cooper and Gordon Taylor. Photographs by Clive Boursnell. Forward by Rosemary Verey. 1986 Rizzoli International Publications, Inc. 712 Fifth Ave., New York, NY 10019 10 x 8 in. hardcover 160 pages \$25.00.

The authors and photographer travelled around England in their search for unique herb gardens. They found fifty-eight delightful ones. There is a description and historical background along with beautiful color photographs of each garden. Some are managed by the National Trust, others are privately owned. All offer a different approach to planting and maintaining an herb garden.

Even though English herb gardens are formal or informal, there is a certain precision about all of them. It must be the intricate planning, all the more apparent in the overall effect of proper proportions. Some of the gardens are attractive patterns edged in box and filled with various herbs. One is a thirty by 9 foot border of aromatic and medicinal herbs planted in front of a tall hedge. The size of each garden is included.

**ENGLISH HERB GARDENS** will be of interest to garden designers, herb gardeners and anyone who enjoys reading books on English gardens.

**HORTICULTURAL BOOKS - NEW AND USED, MANY SCARCE, OUT-OF-PRINT TITLES, WITH EMPHASIS ON WESTERN SUBJECTS.** TOPICS INCLUDE CACTI & SUCCULENTS, ORCHIDS, WILDFLOWERS, BROMELIADS, TREES, AND FLORAS. ALSO SOUTH AFRICAN AND AUSTRALIAN PLANTS. SEND FOR FREE CATALOG. **BROOKS BOOKS, DEPT. CG, P.O. BOX 21473, CONCORD, CA 94521.**

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Prop.



Donald L. Hardgrove  
Hybridist

**THE MACMILLAN BOOK OF BERRY GARDENING** by Gunther Liebster 1986 Collier Books, Macmillan Publishing Company, 866 Third Avenue, New York, NY 10022 5 x 7 1/2 in. 128 pages paperback \$6.95.

Berries are expensive to buy in the supermarket, but easy to grow in the garden. Find out how to grow currants, gooseberries, jostaberries, raspberries, blackberries, strawberries, blueberries, cowberries and cranberries.

There is advice on where to plant, pruning, soil and fertilizers, diseases and pests. Southern California gardeners may not find varieties listed for mild winters, but any local nursery has that information.

This handy pocket-size guide can be taken out to the garden as an instant guide to planting and pruning.

**THE MACMILLAN BOOK OF ORCHIDS** by John Pinsky 1986 Collier Books, Macmillan Publishing Company, 866 Third Avenue, New York, NY 10022 5 x 7 1/2 in. 128 pages. paperback \$6.95.

If one knows how to take care of them, tropical orchids make good houseplants. They will reward their owner with exotic blooms lasting quite some time.

Information on light, temperature, air and humidity, water, fertilizers, potting materials and containers as well as advice on caring for orchids is included. Find out how to propagate by division, back bulbs, tissue culture and seed cultivation. Decide which method to grow them - the open window garden, the closed window greenhouse, orchid cases, under lights, in sun rooms, or in free-standing greenhouses.

Orchids from A to Z - in full color - will help the orchid grower decide which ones to buy.

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**COLOURFUL CACTI and Other Succulents of the Desert** by Edgar and Brian Lamb. 1986 Blandford Press Represented and distributed by Sterling Publishing Co., Inc. Two Park Avenue, New York, NY 10016 4 3/4 x 7 in. paperback 236 pages \$6.95 (\$8.95 Can.).

Cactus and other succulents described in this book are native to the desert and semi-desert areas of the United States (Texas, Arizona and Southern California). They are photographed in their natural habitat.

One area described in detail is in San Diego County, not far from the Mexico border and within fifty yards of the Pacific Ocean. The vegetation is described and there are corresponding color plates of varieties of succulent and cactus, particularly *Bergerocactus emoryi*, *Dudleya lanceolata*, *Ferocactus viridescens* and *Opuntia oricola*.

Some topics included are geographical distribution of cacti and climatic variability, freak forms and cristates, appreciating the desert and conservation, further cultural advice for differing parts of the world, national parks and monuments where cacti can be seen, simplified classification of genera, simplified botanical description of species, and a simplified glossary of botanical terms.

**INDOOR BONSAI** by Paul Lesniewicz 1985 Blandford Press Reprinted 1986. Represented and distributed by Sterling Publishing Co., Inc. Two Park Avenue, New York, NY 10016 4 3/4 x 7 1/2 in. 208 pages paperback \$7.95 (\$10.95 Can.) hardcover \$14.95 (\$19.95 Can.).

The ability to capture the essence of nature in miniature is quite an art. It takes an educated eye, patience, knowledge, skill, proper tools and a suitable specimen. This excellent book provides the knowledge.

In Japanese, "bon" means pot, "sai" means tree. A bonsai is a miniature tree planted in a pot and resembles a full size tree except in size. Its leaves and stems are smaller, but the size of the fruit and flowers remain the same. The height is between eight and twenty-eight inches.

Bonsai are usually grown outdoors as the trees need the sun, light, humidity and temperatures to which they are accustomed in normal growing conditions. However, this particular book emphasizes species which can be grown indoors all year round. This is an exciting concept since it allows indoor gardeners to enjoy bonsai, and offers opportunities for the use of bonsai in interior plant design.

There are many color photographs in the book. There are chapters on creating your own indoor bonsai, optimum conditions for indoor bonsai, advice on repotting and root pruning, lists of indoor bonsai species, and tropical and subtropical plants suitable for training as indoor bonsai.

Paul Lesniewicz has written a thorough guide to growing indoor bonsai. It will be of interest to gardeners and bonsai enthusiasts alike.

**DESIGNING WITH FLOWERS** by Tricia Guild, Photographs by David Montgomery, Text by Nonie Niesewand. 1986 Crown Publishers, Inc., 225 Park Avenue South, New York, NY 10003. 10 1/2 x 10 1/2 in. 191 pages. hardcover. \$24.95.

Gardeners who love to see their flowers blooming happily in their garden may be coaxed into cutting a few for an indoor bouquet after reading this book. According to the author, "The aim should be not to draw attention to human ingenuity but to do justice to the individual characteristics of each plant as it grows outdoors. However much time and care you put into a composition, the final result should look natural, unaffected, inevitable".

One must be careful about combining colors. Harmonizing colors are easier to put together in a pleasing effect than contrasting colors. With contrasting colors one must have a proper balance between strong and muted tones. Harmonizing colors are good for large bunches; contrasting colors are good in small bunches. There are photographs of arrangements in most color tones.

There are examples for using different types of containers. Glass containers allow the stems to be seen and become an integral part of the arrangement. Ceramic containers are good for wood stems that need to be crushed to take in more water.

This attractive book is packed with over 180 color photographs. It emphasizes how to use flowers in the home, how to group small bunches, and shows how to place flowers in any room of the house. There are illustrations of the author's favorite flowers for arranging and advice on how to use them.

**THE CACTUS PRIMER** by Arthur C. Gibson and Park S. Nobel. 1986 Harvard University Press, Cambridge, Mass. 02138. 8 3/4 x 11 1/4 in. hardcover 286 pages \$39.95.

Horticulturists and cactus enthusiasts will find **THE CACTUS PRIMER** to be an invaluable resource guide. The book is intended to "bridge the gap between the professional cactus specialist, who obtains the basic information through research, and others who wish to have the information in accessible form".

General features of cacti are discussed. The primitive features of cacti, such as certain species of pereskia, are examined to explain how cacti have evolved over the years. There are chapters on Succulence, Gas Exchange and Crassulacean Acid Metabolism, Areoles and Spines, Tubercles and Ribs, Factors Affecting Distribution, Growth Habits, Special Chemicals, Phylogeny and Speciation, and Evolutionary Relationships. There is a bibliography at the end of each chapter.

The authors are professors of Biology at the University of California at Los Angeles. Readers having a scientific background will appreciate this comprehensive study of the biology of cactus.

# NOW IS THE TIME...



A CULTURAL CALENDAR OF CARE FROM OUR AFFILIATES

Compiled by Penny Bunker

## BEGONIAS Margaret Lee

**Feed** tuberous begonias in September as long as leaves remain green.

**Take cuttings** and plant to increase your collection and share.

**Give** a final feeding of the year to your regular begonias in October unless you have fed all year round with a balanced fertilizer.

**Start** withholding water from the tuberous variety in October and, of course, do not feed them again.

## BONSAI Dr. Herbert Markowitz

**Water** to keep plants moist - **do not** allow to dry out. On hot days, spray after the temperature has cooled in the evening.

**Place** plants under lath or shade to protect from burning.

**Transplant** some trees with care - better to just transfer to a pot one size larger and add new plant material, if necessary.

**Feed** young trees carefully using about 1/3 strength, to encourage new growth.

**Feed** 1/4 strength fertilizer to those trees showing signs of being in their growth cycle (showing new growth or buds).

**Trim** and shape your deciduous trees.

**Wait** until spring for any major transplanting.

## BROMELIADS

**Feed** roots and foliage with 1/4 strength balanced fertilizer.

**Start** decrease of water, but keep moist, especially during the dry Santa Ana winds.

**Not water** more than once a week if the weather turns cool - do not water at all if the rains begin.

**Keep** cups clean. Dump water from cups if a cold spell hits. It helps prevent center rot.

**Maintain** snail control program . . . but do not put bait in cups.

**Remove** off-sets for the last time before spring. Be sure pups are at least 1/3 size of mother, or leave on until next spring.

## CACTI & SUCCULENTS Verna Pasek

**Divide** overgrown plants and propagate new growth.

**Repot** other rootbound plants - look for roots growing out of drainage holes.

**Keep** moisture level up, especially if Santa Ana winds occur.

**Feed** with low nitrogen fertilizer.

**Check** for pests and take immediate action.

For scale and mealybug, use full strength alcohol either as a spray or dab with cotton swabs. Guard against slugs, snails, and insects.

**Protect** new growth from sunscald.

## CAMELIAS Gene Snooks

**Continue** a regular watering program during bud development.

**Fertilize** with 0-10-10, 2-10-10 or similar low nitrogen fertilizer to have best bloom development.

**Apply** supplemental iron and zinc if indicated by pale foliage with darker green veins.

**Start** or continue to disbud for better blooms leaving one bud per cluster or one bud per branch for quality show blooms.

**Spray** for bud mites or spider mites with kelthane or similar miticide.

**Apply** gibberellic acid for earlier blooms. Buds should open in about two months.

**Prepare** for possible Santa Ana winds with portable windbreaks. Also wet the areas, as well as the leaves, several times a day during the Santa Ana.

## DAHLIAS Abe Jansen

**Maintain** a regular watering program until the first of October, then cut down gradually.

**Spray** to prevent mildew and spider mite.

**Feed** with potash to promote root growth - it also helps them to keep better during the winter.

**Clean** up old leaves and stalks, preparing for fall and winter storage.

## EPIPHYLLUM Frank Granatowski

**Protect** new growth of plants from wind damage.

**Maintain** good grooming habits by removing dead, non-productive, and unsightly branches, thus conserving the energy for the remainder of the plant. Will produce stronger blooms next spring.

**Protect** plants from excessive direct sunlight.

**Prevent** the soil from drying out completely.

An occasional misting or spraying of foliage can be very beneficial.

**Bait** for snails and slugs - a few granules of Sluggeta at the base of the plant is very effective and leaves little or no unsightly residue.

**Practice** preventive maintenance regarding insect control; use insecticides such as Malathion or Orthene only if absolutely necessary. (Be sure to read and follow instructions on the label).



## **FERNS** Ray Sodomka

**Avoid** direct sun, but give maximum light.

**Water** and maintain humidity by keeping surrounding areas damp. Beware of the hot, dry winds.

**Fertilize** plants regularly with high nitrogen formula.

**Plant** spore of all varieties.

**Trim** off dead fronds.

**Repot** house ferns to next size pot if overcrowded.

**Repot** house fern (Boston fern) with 1/8 strength fertilizer every week and maintain humidity around plant with saucer pot, or a pebble-filled saucer.

**Check** for aphids, mealybugs, and scale; may use Malathion-50.

**Keep** snails, pillbugs, and slugs under control; use metaldehyde granules.

## **FUCHSIAS** William Selby

**Maintain** a regular watering program but be careful **NOT** to overwater. Mist in cool of evening during hot Santa Ana days.

**Take** cuttings from good healthy branches, using only the tender tips. October is the better month to propagate new plants.

**Clean** spent blooms, yellow leaves, and berries.

**Trim** baskets in frost free areas.

**Continue** insect control; be sure to spray underside of leaves - the hiding place for eggs.

## **GERANIUMS** Carol Roller

**Water** thoroughly when plants become somewhat dry. Allow the excess water to drain away. Keep foliage as dry as possible.

**Continue** feeding with a balanced fertilizer dissolved in water, using less than the recommended amount as often as needed to keep plants growing well.

**Continue** a pest control and disease prevention program, using all products according to manufacturer's directions.

**Begin** pruning. On regals, scented, and similar types, at least one green leaf should be left on each stem.

**Make** cuttings from the prunings. Shelter cuttings from extreme weather.

**Keep** unpruned plants tidy by removing faded flowers and discolored leaves.

**Continue** to rotate plants on a regular basis to keep them well-shaped.

## **GESNERIADS** Mike Ludwig

**Maintain** a watering program during dry, hot weather - it may mean more watering.

**Watch** for red spider as a problem - spray with kelthane.

**Watch** that plants remain in the shade as the sun is changing its position.

**Give** less food to retard tender growth until after winter cold.

the sun is changing its position.

**Give** less food to retard tender growth until after winter cold.

**Sterilize** greenhouses, to have ready for plants to be brought inside.

**Control** pests. To prevent spread of disease and pests, check new plants and those to be brought in from outdoors.

**IRIS** San Diego-Imperial Counties Iris Society  
**Divide** and plant clumps of tallbearded iris.  
**Feed** established tall-bearded that are not being divided.

**Control** slugs and snails.

**Plant** beardless iris: Spurias, Siberians, Louisianas, and Japanese varieties. Keep moist until well established. Louisianas and Japanese are grown in pots in pools or in swampy conditions.

**Clean** up beds and discard old fans and debris.  
**Trim** unguicularis back so the small flowers may show.

**Plant** Dutch bulbous iris in October for spring bloom.

## **ORCHIDS** Charlie Fouquette

**Spray** and mist during Santa Ana weather to maintain humidity and moisture.

**Check** for scale and mites and other pests - keep control program going. Be careful of pesticide poisoning - wear apron, mask, and gloves.

**Begin** feeding low-nitrogen high potash, high phosphate fertilizer on cymbidiums.

**Check** mister, heater, and cooler controls.

**Feed** a 3-1-2 fertilizer to phals; keep damp.

**Let** cattleyas remain in position and do not rotate as they may be blooming.

**Stake** cymbidium spikes for support.

**Check** the sun as it is changing to the south - watch for sun burning from different angle.

**Feed** the multigenics of Oncidialum varieties with a dilute solution of 2-2-2 if in organic media; feed 3-1-2 if in bark base.

## **ROSES** Brian Donn

**Maintain** a good watering program during Santa Ana conditions.

**Continue** feeding program until mid-October.

**Water** well and give a top dressing of manure.

**Do** a clean-up spray for mildew, rust control, insects and worms. Funginex is excellent.

**Control** mites with a drenching spray with kelthane.

**Trim** bushes and tall growth in early September and give a feeding for fine blooms in October.

**Clean-up** debris, especially spent foliage from around bushes.

(CONTINUED ON PAGE 159)

**PACIFIC BEACH GARDEN CLUB**

Pres: Mrs. Raymond E. Smith 488-0830  
4995 Fanel Street  
San Diego, CA 92109  
2nd Mon, Sep, thru Jun., 1:00 p.m.  
Pacific Beach Community Center

**PALOMAR CACTUS AND SUCCELUIT SOCIETY**

Mr. Frank Lapick 753-2892  
2602 La Gran Via  
Carlsbad, CA 92008

**PALOMAR DISTRICT CALIFORNIA GARDEN CLUBS, INC.**

Dir.: Mrs. Alvin F. Putnam 749-9587  
15665 Fruitvale Road  
Valley Center, CA 92082

**PALOMAR ORCHID SOCIETY**

Pres: Ted Pinger 436-2326  
457 E. Glauco  
Leucadia, CA 92024

2nd Fri., Vista Senior Citizen Center  
7:30 p.m.

**POINT LOMA GARDEN CLUB**

Pres: Kimberly Snedden  
223-3806  
4423 Alhambra Street  
San Diego, CA 92107  
2nd Wed., Westminster Presby. Church  
Talbot & Canon, 10:00 a.m.

**POWAY VALLEY GARDEN CLUB**

Pres: Mrs. John Stokley 484-7436  
13747 Freepoint Road  
San Diego, CA 92129  
2nd Wed., Hally's Garden Room  
13519 Poway Rd., Poway 9:00 a.m.  
**PROFESSIONAL WOMEN'S HORTICULTURE AND LANDSCAPE ASSOCIATION (PWLHA)**  
Pres: Karen Kees  
P.O. Box 3424  
San Diego, CA 92103  
4th Wed Jan., Mar., May, Sep; 1st Wed Nov.

**RANCHO SANTA FE GARDEN CLUB**

Pres: Corinne Gruenwald  
P.O. Box 1696  
Rancho Santa Fe, CA 92067  
2nd Tues., Rancho Santa Fe Garden Club  
Avenida de Acadias, Rancho Santa Fe  
7:30 p.m.

**SAN CARLOS GARDEN CLUB**

Pres: Mrs. Wendell W. Bemis 465-6834  
7808 Lake Adlon Drive  
San Diego, CA 92119  
4th Tues., Home of Members, 9:30 a.m.

**SAN DIEGO ASSOCIATION OF PROFESSIONAL HORTICULTURISTS**

Pres: Miss Cynthia Drake 271-8933  
11121 Saunders Court  
San Diego, CA 92131  
4th Mon., Casa del Prado Rm. 104, 7:30 p.m.

**SAN DIEGO BONSAI CLUB, INC.**

Pres: Mr. Stan Childs 583-0562  
5460 Baja Drive  
San Diego, CA 92115

**SAN DIEGO BOTANICAL GARDEN FOUNDATION, INC.**

Pres: Mr. Harry C. Haelsig 582-0536  
4750 55th Street  
San Diego, CA 92115

**SAN DIEGO BROMELIAD SOCIETY**

Pres: Mr. Jack Percival 222-7327  
2711 Willow Street  
San Diego, CA 92106  
1st Thurs., Byzantine Catholic Church  
2235 Galahad Rd., Serra Mesa, 7:45 p.m.

**SAN DIEGO CACTUS & SUCCELUIT SOCIETY**

Pres: Dr. Leroy Phelps 280-9690  
4094 36th Street  
San Diego, CA 92104  
2nd Sat., Casa del Prado, 1:30 p.m.

**SAN DIEGO CAMELLIA SOCIETY**

Pres: Cynthia Drake 271-8933  
11121 Saunders Court  
San Diego, CA 92131  
3rd Wed., Casa del Prado, 7:30 p.m.

**SAN DIEGO COUNTY BRANCH NATIONAL FUCHSIA SOCIETY**

Pres: Janet Wright 722-3373  
610 N. Nevada Street  
Oceanside, CA 92054  
2nd Thurs., Palmquist School  
1999 California St., Oceanside 7:00 p.m.  
**SAN DIEGO COUNTY DAHLIA SOCIETY**  
Pres: Mr. Martin Walsh 277-5165  
4077 Mt. Everest Blvd.  
San Diego, CA 92111  
4th Tues., Casa del Prado, 7:30 p.m.

**SAN DIEGO COUNTY ORCHID SOCIETY**

Pres: Mr. David Reid 723-7996  
31970 Rockinghorse Road  
Escondido, CA 92026  
1st Tues., Casa del Prado, 7:30 p.m.  
**SAN DIEGO DAYTIME AFRICAN VIOLET SOCIETY**  
Pres: Mrs. Toni Baker 582-7516  
6475 50th Street  
San Diego, CA 92120  
2nd Mon., Fellowship Hall, Christ United  
Methodist Church, 3295 Meade, 12 noon

**SAN DIEGO EPIPHYLLUM SOCIETY**

Pres: Mr. Ron Miller 746-9620  
822 Via Rancho Parkway  
Escondido, CA 92025  
2nd Wed., Casa del Prado, 7:30 p.m.  
**SAN DIEGO FERN SOCIETY**  
Pres: Mr. Donald Callard 438-9409  
7146 Argonauta Way  
Carlsbad, CA 92008  
3rd Thurs., Casa del Prado, 7:30 p.m.

**SAN DIEGO FUCHSIA & SHADE PLANT SOCIETY**

Pres: Mr. Ron Berkel 465-7649  
1142 Osage Drive  
Spring Valley, CA 92077  
2nd Mon., Casa del Prado, 7:30 p.m.  
**SAN DIEGO GERANIUM SOCIETY**  
Pres: Mr. George Plaisted 583-9551  
6356 Delbarton Street  
San Diego, CA 92120  
2nd Tues., Casa del Prado, 7:30 p.m.

**SAN DIEGO GESNERIAD SOCIETY**

Pres: Mrs. Michael Ludwig 461-6906  
7007 Mt. Vernon Avenue  
Lemon Grove, CA 92045  
1st Thurs., Casa del Prado, 7:30 p.m.

**SAN DIEGO-IMPERIAL COUNTIES IRIS SOCIETY**

Pres: Dorothy Driscoll 463-6700  
6338 Lake Athabaska Place  
San Diego, CA 92119

**SAN DIEGO ROSE SOCIETY**

Pres: Ms. Patty Howell 436-3960  
1045 Passiflora Ave.  
Leucadia, CA 92024  
3rd Mon., Casa del Prado, 7:30 p.m.

**SAN DIEGO GARDEN CLUB**

Pres: Mrs. Jan Netusil (Mary) 753-1044  
912 Emma Drive  
Cardiff, CA 92007  
4th Wed., Ecke Family Bldg., Quail Gar.  
Encinitas, 10 a.m.

**SAN MIGUEL BRANCH AMERICAN BEGONIA SOCIETY**

Pres: Mr. Michael Ludwig 461-6906  
7007 Mt. Vernon Avenue  
Lemon Grove, CA 92045  
1st Wed., Casa del Prado, Rm. 104,  
7:30 p.m.

**SOGETSU SCHOOL OF IKEBANA**

Pres: Mrs. Leroy Lahey 429-6198  
2829 Flax Drive  
San Diego, CA 92154

**SOUTHWEST GROUP, JUDGES COUNCIL**

Chr. Mrs. Edwin R. Gould 475-8996  
2111 Rachel Avenue  
San Diego, CA 92139  
1st Wed., Casa del Prado, 10:00 a.m.

**SOUTHWEST HEMEROCALLIS SOCIETY**

Pres: Mr. C.R. Bowman 273-7937a  
3927 Sequoia Street  
San Diego, CA 92109  
1st Sat., Feb., Apr., Jun., Sep., Nov.  
10 a.m. Quail Gardens Meeting Room  
Quail Gardens Rd., Encinitas

**VILLAGE GARDEN CLUB OF LA JOLLA**

Pres: Dorothy C. Carroll 578-1484  
8304 Hydra Lane  
San Diego, CA 92126  
4th Thurs., La Jolla United Methodist  
6063 La Jolla Blvd., La Jolla 1:00 p.m.  
**VISTA GARDEN CLUB**  
Pres: Mrs. Edward Kelly 726-7789  
30032 Disney Lane, Vista, CA 92084  
1st Fri., at 222 Jefferson St., Vista  
Senior Service Center, 12 noon

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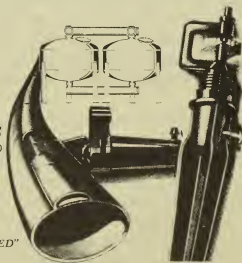
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## VEGETABLES

- Set out** started plants now available in the nurseries in the garden: cabbages and relatives, chard, kale, and lettuce of all kinds.
- Plant** seed of vegetables that will grow during the cold and short days that should be soon upon us, such as carrots, beets, turnips, kohlrabi, radishes, spinach.
- Water** deeply so plants are better able to stand the very hot and very dry weather that sometimes occurs at this time of year.
- Control** weeds and fertilize plants so they can make the maximum growth before the temperature becomes cold and growth slows.
- Harvest** vegetables now bearing heavily so they are in prime condition when used, and the bushes and vines are encouraged to bear longer.

## GREEN THUMB

- Divide** or transplant perennials such as coreopsis, gazanias, Shasta daisies, columbines, and perennial alyssum. New roots develop before winter and plants become established before spring growing season starts.
- Shade** transplants for a week or more and keep them watered. Scatter snail bait around the new plantings.
- Continue** to stake mums.
- Transplant** belladonna lilies after blooming.
- Prepare** beds for bulbs with humus and start looking for bulbs in nurseries. It is too early to plant most bulbs in southern California, but they can be placed in an extra refrigerator for a few weeks before planting.
- Mulch** acid loving plants using peat moss or ground bark.
- Plant** winter sweet peas.
- Prune** wisteria to prepare vines for their spring bloom.
- Feed** well established shrubs with a balanced fertilizer; water thoroughly.



CONTINUED

November 19-23

**43rd Annual National Chrysanthemum Society's Convention**, Worthington Hotel, Sundance Square, Fort Worth, Texas. Show will be at Tarrant County Court House, Sundance Square, Ft. Worth, Texas. Public is cordially invited.

**At press time, the Floral Tour schedule was not firm. Information concerning tours may be obtained by calling Jerry Ray 232-2661.**

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